

Get a grip and TESTit

For a safe, precise and productive manufacturing process a regular check of the actual clamping force being achieved is indispensable. To address this demand, Hainbuch has launched the extremely capable and easy to use TESTit clamping force gauge. Capable of measuring clamping forces greater than 200kN the TESTit is the only device currently capable of measuring internal and external workholding systems, such as mandrels and manual/power jaw or collet chucks.

Manufacturing process security often requires the maximum permissible holding force of any clamping device be applied during the mechanical machining of any components, whether turning, milling or grinding. While this is straightforward for solid workpieces, where the clamping force should be as high as possible to minimise any centrifugal force losses, an increasing number of thin-walled and sensitive workpieces are being manufactured that can easily be deformed if too much clamping force is applied.

Mark Jones, managing director of

Hainbuch's sole UK agent, Leader Chuck Systems says: "Design necessity and optimum material selection means that some components require lighter clamping forces, or manufacturers risk damaging the part. However, if it not clamped securely the machining operation will be compromised. With the margin between clamping too tightly and not tight enough being so narrow it is vital that the actual clamping force is known. Using the TESTit gauge the clamping force can then be calibrated to exactly match the process requirements."

In operation, the new TESTit gauge is completely wireless with all the clamping force values transmitted via Bluetooth to a display device, such as a smart phone, desktop or tablet PC, or PDA with the appropriate software installed. Featuring automatic sensor recognition and a Li-ion rechargeable battery for more than 5 hours of operating time, the TESTit clamping force gauge can be used to measure stationary or rotating holding forces both internally and externally.

"In the face of global competition manufacturers have to optimise every



machining process. Using the new TESTit clamping force gauge the efficiency of any fixturing will be maximised. If you cannot measure something, you cannot control it, so specific clamping measurement data should be demanded by industry," concludes Mark Jones.

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SCHUNK launches new edition of best-selling chuck

SCHUNK has sold over 10,000 units of its manual ROTA-S plus lathe chuck to date. This unprecedented success with the highly efficient classic chuck now sees the competence leader for clamping technology and gripping systems launch a Version 2.0. The new ROTA-S Plus Version 2.0 now incorporates an optimised wedge bar drive system and an improved lubricant system to ensure consistently high

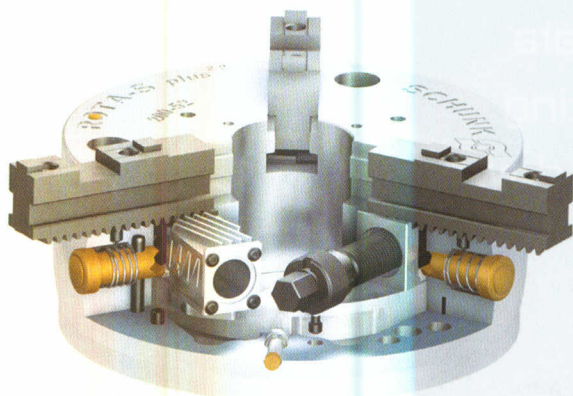
clamping forces from the new lathe chuck.

Since higher rotational speeds and cutting speeds are possible, users can apply more efficient cutting strategies that shorten the manufacturing time. The quick-change jaw system has now been improved, too. A new optimised drive allows fast, comfortable and repeat accurate jaw changes. This new lathe chuck is fully compatible with its predecessor and customers' already existing base jaws can be used in the new Version 2.0. SCHUNK sets great importance on safety issues and to this end the new three-fold jaw safety device prevents operating errors. Moreover, SCHUNK has located an indicator pin at the chuck circumference to display the individual clamping status. Three useful additional options complete the next generation manual chuck. Firstly,

SCHUNK is offering the lathe chuck with a manually actuated expansion arbor that can now be quickly retrofitted. It is directly actuated via one of the ROTA-S Plus 2.0 chuck jaws and it precisely clamps internal diameters as small as 20mm in the chuck. The ROTA-S Plus 2.0 can also be equipped with an enclosed protection sleeve, or a deep stop on request. This makes it perfectly adjusted to the individual clamping tasks. This innovative manual chuck is available in sizes 165, 200, 250 and 315mm. Information on larger chuck diameters will be available soon.

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Force to be reckoned with

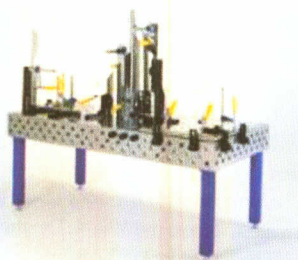
Hainbuch's easy-to-use TESTit clamping force gauge is capable of measuring clamping forces greater than 200kN and of measuring internal and external workholding systems, such as mandrels and manual/power jaw or collet chucks.

Says Mark Jones, MD of Hainbuch's UK agent, **Leader Chuck Systems**: "Design necessity and optimum material selection means that some components require lighter clamping forces, or

manufacturers risk damaging the part. However, if it not clamped securely the machining operation will be compromised. With the margin between clamping too tightly and not tight enough being so narrow it is vital that the actual clamping force is known. Using the TESTit gauge the clamping force can then be calibrated to exactly match the process requirements."

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RAPID CLAMPING



Available from **Surface Technology Products**, the S4 System welding table is suitable for tasks such as clamping, measuring, monitoring, fixture construction, bending and folding. It can also be used as a

machine base for light milling work, but, in 80% of applications, it is used as a welding table.

At the heart of the system is a universal ball bolt. Its mechanical design means it can be reliably fixed in place with one hand in a second, reducing set-up and changeover times.

The S4 system is made with a tolerance of 0.03mm and has more than 100 additional tools, making it suitable for the manufacture of individual welded parts and prototypes and as the basic clamping system for series manufacture – both for manual and robotic welding tasks.

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Planetary mixers

Some materials, such as silver-loaded pastes, adhesives and inks, can suffer degradation in storage. This can be rectified by re-mixing and degassing – quickly achieved by use of the Thinky ARE series of planetary mixers supplied by **Intertronics**.

Particles of silver of a high specific gravity settle during storage and are difficult to disperse evenly by manual mixing. Reduced electrical conductivity and inconsistent quality



can result from poor homogeneity and air entrapment. Re-dispersion of silver-loaded materials is achieved by mixing and de-aeration with an ARV-310. It takes just 15 to 30s of re-mix prior to use to de-gas and disperse stored silver paste to optimal performance.

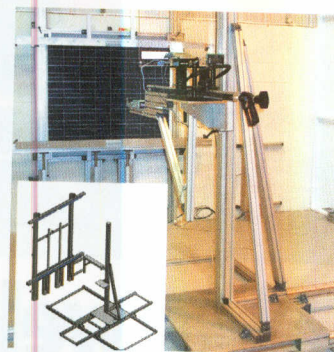
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PASSING THE TEST AT IPSOL

From its base in Nottingham IPSOL Energy provides product test, R&D and consultancy services in clean energy with particular emphasis on the Solar Photovoltaic market. IPSOL's Centre of Excellence includes test and measurement equipment based around **MiniTec** Profile System machine framing and building components.

MiniTec's structural elements and machine frame hardware have been used for three IEC certification tests that each required the flexibility to cater for an assortment of solar panel types and sizes as the Unit Under Test, and provide a stable structure for measurement and test-support equipment. Tests included an enclosed 30m² Soak Room where PV panel performance is measured, a UV-Degradation test-stand, and Hail Test.

MiniTec worked with IPSOL, using its own in-house design service to develop 3D CAD concept drawings for each test-stand, which were then developed. IPSOL sourced and



supplied third party components to MiniTec to ensure their correct installation and to coordinate electrical cabling requirements.

Rails, hardware and frame construction can be adapted during build. MiniTec's Powerlock fastening system is an effective frame connector that requires just the twist of an Allen key with no profile pre-machining. This makes profile re-use and adaptation possible with minimum cost and effort.

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Accreditation for heat treatment

Following a 12-month period of investment in new technology, processes and training, spring, bent wire form and assembly manufacturer **William Hughes** has gained Nadcap

accreditation for its heat treatment facility, one of just a handful of companies in the UK to achieve this.

The company procured a new industrial oven. As part of gaining Nadcap accreditation, the oven is subject to rigorous temperature uniformity surveys to ensure a tolerance of $\pm 5^{\circ}\text{C}$ can be maintained over a range from 300-750°C.

William Hughes has also invested in a Zwick tensile testing machine and software. This has been audited for room temperature tensile testing and accreditation achieved.

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TUBE BENDING TECHNOLOGY ON SHOW

At Tube 2012 (26 to 30 March, Düsseldorf), all-electric tube bending machine specialist **Unison** will be demonstrating a machine with laser-controlled spring-back correction system. This will be the first time the equipment will be shown publicly in Europe.

The tube bending machine will be equipped with a new form of quick-release tooling and a barcode identification system, which enables machine operators to handle

complete tool changeovers within 2 to 5min, with full verification of the process.

ENTER 97580 Tel: 01723 582868
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AUTOMATION

MOBILE TERMINAL

New from Advantech-DLoG is the latest 15in version of its MTC series. Designed for mobile and stationary applications, the mobile thin client (MTC) 6/15 terminal features a high quality, durable construction, and a mix of proven and cutting edge technologies which is claimed to provide the highest

reliability. It is suited not only to challenging applications in the area of machine data acquisition and production

data acquisition, but also to use in the logistics field.

Fulfil requirements from controlling to visualisation and monitoring applications, the terminal is equipped with the latest technology such as CFast, which uses SATA connections to deliver very short boot times and high levels of performance.

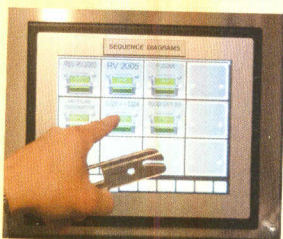
Tel: 01273 666990

TOUCH SCREEN

Netherlocks has launched its new Interlock System Information (ISI) Touch Screen key management device. As a standalone unit or integrated into a key cabinet or control panel, the ISI Touch Screen stores all relevant information about an interlock system in a digitised, centralised, user-friendly format that is easily accessible by any operator.

All relevant interlock keys are shown on screen – simply touching them will display detailed information about the key itself and the related system: system name, operating sequence logic, P&ID and Location. Additional buttons are present for on-screen instructions, general interlocking information and company-specific content.

Tel: +31 (0)172 471 339



ROBOTS GIVE FASTER CELL TOOL CHANGE TIMES

As part of a major investment by Norgren at its Lichfield manufacturing site, **Kawasaki Robotics** has replaced two aging robots with two Kawasaki RS06L robots. The new robots allow faster

cell tool change times and are able to work more comfortably within target cycle times.

Installed over 13 years ago, the original Kawasaki robots provided virtually continuous operation in the

automotive/truck air-brake fittings section. The new Kawasaki RS robots load and unload brass fittings to two rotary transfer machines, which have been moved to new bays in the plant. The cells are programmed to produce up to 100 variants of fitting in batches.

"The new robots are quicker – they work well within the machine cycle time and present the part to the machine before its cycle is finished," says Mark Clark, manufacturing engineer at Norgren. "In addition, the old robots had a shorter reach which meant they needed to be moved on a slide fixture away from the transfer machine to facilitate tool setup. This had a potential to introduce inaccuracies and effectively slowed down tool changes – this process isn't necessary now as the new Kawasaki RS06L has a longer reach. So we now have faster tool changes and zero risk of the robot being out of position."

Tel: 01925 713000

LIFE CALCULATED

Din Rail power supply manufacturer, **PULS UK**, has introduced data logging to its single-phase QS40 and three-phase QT40 1Kw units. The move will enable the company to establish life expectancy figures based on actual in-service conditions.

PULS uses semi conductor technology to collect data relating to operating temperature, input voltages and other vital information which can later be downloaded to calculate the life expectancy of the product.



PULS UK's MD Harry Moore said: "Being able to accurately establish life expectancy of a power supply will be a major benefit for

our customers, especially those with installations in difficult to reach or hazardous locations. Our new technology means we will be able to accurately predict how long our units are likely to last, so our customers can replace them before things become critical.

Timely maintenance is always cheaper than dealing with a breakdown!"

Tel: 0330 999 9988

MAGNETIC SENSORS

The MFT and MGT sensors from **ifm electronic** use GMR magnetic technology (the same as in a pc hard drive) to detect a magnetic target at long ranges. This development by ifm sees the sensor incorporated into a completely sealed all-round stainless steel housing in standard M12 (MFT) and M18 (MGT) sizes, and will be of particular interest to the food industry

Sensing typically 60 to 70mm (depending on the magnet used and how it is fitted), the ranges fit neatly between inductive sensors and photocells – in harsh environments. Full-metal magnetic sensors



designed for use in the food industry feature IP ratings of 68 and 69K, will operate in temperatures from 0 to 100°C.

Tel: 020 8213 0000



CLAMPING CHECK

Providing a way to check clamping forces in manufacturing processes, the Hainbuch **TESTit** clamping force gauge is available from **Leader Chuck Systems**. Capable of measuring clamping forces greater than 200kN, the TESTit is claimed to be the only device currently capable of measuring internal and external workholding systems, such as mandrels and manual/power jaw or collet chucks.

In operation, the new TESTit gauge is completely wireless with all the clamping force values transmitted via Bluetooth to a display device, such as a smart phone, desktop or tablet PC, or PDA with the appropriate software installed. Featuring automatic sensor recognition and a Li-ion rechargeable battery for 5+ hours of operating time, the TESTit clamping force gauge measures stationary or rotating holding forces both internally and externally.

Tel: 01827 700000



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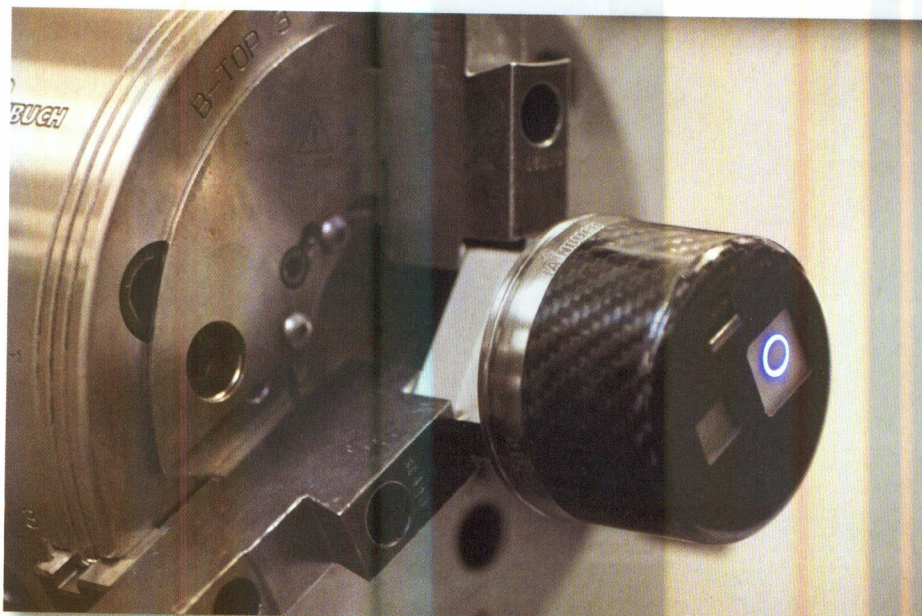


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Based in Tamworth, Leader Chuck Systems has an enviable reputation for the in-house design and production of Leader chucking, stationary clamping, gripping and workholding products. A respected brand name for high quality equipment with more than 50 years experience, the company also stocks products from the very best suppliers, such as Bison, Gamet, Hainbuch, Hewa, Iram, Lexair, Maprox, MicroCentric, Posistop and Zweifel. Able to provide the right chuck or gripping solution for any application, Leader Chuck offers quality, precision, and reliability at competitive prices with reliable expert advice and a commitment to customer service.



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